

CLAIMS

What is claimed is:

1. A method of executing instructions, comprising:
5 maintaining a program counter that specifies an instruction in a instruction section for execution; and
maintaining a data counter that specifies a data location in a data section for use with the instruction.
- 10 2. The method of claim 1, further comprising:
executing the instruction specified by the program counter;
incrementing the program counter to a next instruction;
determining if the data location was for use with the instruction; and
15 incrementing the data counter to a next data location if the data location was for use with the instruction.
3. The method of claim 2, further comprising maintaining a plurality of data counters that specify data locations in a plurality of data sections.
- 20 4. The method of claim 3, wherein each data location includes data values of different lengths.
5. The method of claim 1, wherein the data location includes a data value for use with the instruction.
- 25 6. The method of claim 1, wherein the data location includes cache information for use with the instruction.
7. The method of claim 6, wherein the instruction invokes a virtual function
30 and the cache information includes a class and member function.
8. The method of claim 1, wherein during execution the instruction section is stored in read only memory (ROM) and the data section is stored in random access memory (RAM).
- 35

9. The method of claim 1, wherein the instruction is a virtual machine instruction.

10. A computer program product that executes instructions, comprising:
5 computer code that maintains a program counter that specifies an instruction in a instruction section for execution;
computer code that maintains a data counter that specifies a data location in a data section for use with the instruction; and
a computer readable medium that stores the computer codes.

11. The computer program product of claim 10, wherein the computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, and data signal embodied in a carrier wave.

12. A data structure stored by a computer readable medium for executing instructions, comprising:
an instruction section including a plurality of instructions;
a program counter that specifies an instruction in the instruction section;
a data section including a plurality of data locations, each of the plurality of data
20 locations being for use with one of the plurality of instructions; and
a data counter that specifies a data location in the data section, the data location being for use with the instruction.

13. The data structure of claim 12, wherein more than one of the data locations
25 is for use with the same instruction.

14. The data structure of claim 12, further comprising a plurality of data counters that specify data locations in a plurality of data sections.

15. The data structure of claim 12, wherein the data location includes a data value for use with the instruction.

16. The data structure of claim 12, wherein the data location includes cache information for use with the instruction.

17. The data structure of claim 16, wherein the instruction invokes a virtual function and the cache information includes a class and member function.

18. The data structure of claim 12, wherein during execution the instruction section is stored in read only memory (ROM) and the data section is stored in random access memory (RAM).

5 19. The data structure of claim 12, wherein the instruction is a virtual machine instruction.